

In the claims:

1-26. (Presently canceled)

27. (Presently amended): A method for assessing whether a test compound is useful for modulating ~~at least one phenomenon selected from the group consisting of non-covalent binding between a protein and one of a cell, a virus, and another protein; cell signaling; cell differentiation; tumorigenesis; cell adhesion; cell motility; cell-to-cell interaction; cell invasivity; cell proliferation; gene transcription; and an immune response,~~ the method comprising:

a) adding the test compound to a first composition comprising ~~one of~~

[[i)]] a polypeptide that has an amino acid sequence at least 90% identical to SEQ ID NO:2 and that exhibits a 47169 activity and

~~ii) a polypeptide that has an amino acid sequence at least 90% identical to SEQ ID NO: 12 and that exhibits a 33935 activity; and~~

b) comparing the activity in the first composition and in a second composition that is substantially identical to the first composition, except that it lacks the test compound,

whereby a difference in the activity in the first and second compositions is an indication that the test compound is useful for modulating the phenomenon.

28. (Previously presented): The method of claim 27, wherein the activity is a glycosyl transferase activity.

29. (Previously presented): The method of claim 28, wherein the activity is ability to transfer an N-acetylgalactosamine moiety from uridine diphosphate to a hydroxyl moiety of a serine or threonine residue of a protein.

30. (Presently amended): The method of claim 27, wherein the composition comprises a cell which comprises a nucleic acid encoding either a 47169 protein or a 33935 protein.

31. (Presently amended): A method for assessing whether a test compound is useful for modulating ~~at least one phenomenon selected from the group consisting of non-covalent binding between a protein and one of a cell, a virus, and another protein; cell signaling; cell differentiation; tumorigenesis; cell adhesion; cell motility; cell-to-cell interaction; cell invasivity; cell proliferation; gene transcription; and an immune response,~~ the method comprising:

a) adding the test compound to a composition comprising a cell which comprises a nucleic acid that encodes ~~one of~~

i) a polypeptide that has an amino acid sequence at least 90% identical to SEQ ID NO:2 and exhibits a 47169 activity; and

ii) ~~a polypeptide that has an amino acid sequence at least 90% identical to SEQ ID NO: 12 and exhibits a 33935 activity; and~~

b) comparing the activity in the first composition and in a second composition that is substantially identical to the first composition, except that it lacks the test compound,

whereby a difference in the activity in the first and second compositions is an indication that the test compound is useful for modulating the phenomenon.

32-33 (Presently canceled)

34. (Presently amended): A method for identifying a compound useful for modulating ~~at least one phenomenon selected from the group consisting of non-covalent binding between a protein and one of a cell, a virus, and another protein; cell signaling; cell differentiation; tumorigenesis;~~

~~cell adhesion; cell motility; cell-to-cell interaction; cell invasivity; cell proliferation; gene transcription; and an immune response~~, the method comprising:

a) contacting the test compound and a polypeptide, or with a cell that expresses the polynucleotide, wherein the polypeptide is selected from the group consisting of

i) a polypeptide which is encoded by a nucleic acid molecule comprising a portion having a nucleotide sequence which is at least 90% identical to one of SEQ ID NOs: 1[[,]] or 3, ~~11, and 13~~; and

ii) a fragment of a polypeptide having an amino acid sequence comprising ~~selected from the group consisting of~~ SEQ ID NO[[s]]:2 ~~and 12~~, wherein the fragment comprises at least 25 contiguous amino acid residues of ~~one of~~ SEQ ID NO[[s]]:2 ~~and 12~~; and

b) determining whether the polypeptide binds with the test compound,

whereby binding of the polypeptide and the test compound is an indication that the test compound is useful for modulating the phenomenon.

35. (Presently amended): The method of claim 34, wherein the polypeptide exhibits an epitope in common with a polypeptide having the amino acid sequence of ~~one of~~ SEQ ID NO[[s]]:2 ~~and 12~~.